

REMARKS

Drawings

The Examiner objected to the drawings as failing to comply with 37 CFR 1.84(p)(4) because reference character "40" had been used to designate both an F_t grouper in the Figure 2 and a fit grouper in the specification. The attached sheet of drawings, which includes corrected informal Figure 2, replaces the original Sheet 2.

Information Disclosure Statement

The Examiner requested a copy of the Jong-Sen Lee reference titled "Digital Image Enhancement and Noise Filtering by Use of Local Statistics" as cited on page 11, lines 14-16 of the specification. Exhibit 1 of this paper provides such a copy.

Specification

The Examiner objected to the specification, requesting that the Applicant update the status of U.S. Patent Applications 09/293,197, first cited on page 2, line 13 and 09/457,036, first cited on page 11, line 11. The specification has been so amended to recite the issued U.S. Patent numbers corresponding to these patent applications, as requested.

Claims

In the Office Action dated April 19, 2004, the following objections/rejections were made:

Claims 3-5, 12, 13, and 30: Objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery;

Claims 1, 2, 5-7, 9-11, 14-16, 18-20, 23-26, 28, 29, 31, 32, 35, and 37: Rejection under 35 U.S.C. 102(e) as being anticipated by Kiriki et al. (U.S. Patent No. 6,219,446 B1);

Claims 4, 13, 22, and 34: Rejection under 35 U.S.C. 103(a) as being unpatentable over the combination of Kiriki et al. (U.S. Patent No. 6,219,446 B1) and Tanaka et al. (U.S. Patent No. 6,693,673 B1);

Claims 8, 17, 27, and 36: Rejection under 35 U.S.C. 103(a) as being unpatentable over the combination of Kiriki et al. (U.S. Patent No. 6,219,446 B1) and Silverbrook (U.S. Patent Application Publication No. US 2004/00032512 A1);

Claim 30: Rejection under 35 U.S.C. 103(a) as being unpatentable over the invention of Kiriki et al. (U.S. Patent No. 6,219,446 B1) and Toyoda et al. (U.S. Patent No. 5,461,440 A).

Allowable Subject Matter

The Examiner has stated that Claims 3, 12, 21, and 33 would be allowable if rewritten to overcome the objections under 37 CFR § 1.75(a), set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claims 3, 12, 21, and 33 have been so amended. Accordingly, consistent with the Examiner's statements, these claims are presently allowable.

Claims 3-5, 12, 13, and 30

Reconsideration of the Examiner's objection to Claims 3-5, 12, 13, and 30 under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

As for Claims 3, 4, 12, and 13, Applicant has made the changes suggested by the Examiner.

As for Claim 5, Applicant has amended Claim 1. Claim 1, as amended, recites "a light falloff correction" in Claim 1, Lines 3-4, so as to provide the needed antecedent basis for "said light falloff correction" recited in Claim 5.

As for Claim 30, the "large edge" limitation has been amended to recite using a sigma filter. Support for this limitation appears at Page 11, Lines 6-77, of the specification.

Claims 1, 2, 5-7, 9-11, 14-16, 18-20, 23-26, 28, 29, 31, 32, 35, and 37

Reconsideration of the Examiner's rejection of Claims 1, 2, 5-7, 9-11, 14-16, 18-20, 23-26, 28, 29, 31, 32, 35, and 37 under 35 U.S.C. 102(e) as being anticipated by Kiriki et al. (U.S. Patent No. 6,219,446 B1) is respectfully requested.

In order to anticipate a claimed invention, a cited reference must teach each and every element of the claimed invention. With respect to Claim 1, Kiriki does not anticipate the claimed invention because it does not teach, inter alia, the element recited in amended Claim 1 of “a discontinuity remover that removes discontinuities from said radial traces, thereby producing *continuous* radial traces, wherein said falloff fitter fits said *continuous* radial traces to said model of falloff to determine said light falloff correction for said image.” [emphasis added.]

The Examiner cites Figure 7B and Col. 5, Lines 27-43 of Kiriki as teaching this element of the claimed invention. However, the cited section and Col. 5, Lines 22-27 of Kiriki merely disclose the use of photographs of specific targets. As such, discontinuities do not appear in the images of Kiriki. In contrast, the present invention has the ability to determine a falloff amount or correction from photographs of natural scenes, as opposed to specific targets. The present invention provides the ability to generate continuous radial traces by removing discontinuities from the radial traces which the polar transformer generates. That is, with Kiriki, there are simply not discontinuities appearing in images of specific targets, as is the case with images of natural scenes formed by the polar transformer of the present invention. Accordingly, Kiriki cannot and does not provide the functionality of the present invention of removing such discontinuities from radial traces to produce continuous radial traces.

Independent Claims 10, 19, and 29 have been amended consistent with the amendment to Claim 1. Claims 10 has been amended to include the limitation of “a discontinuity remover that removes discontinuities from said radial traces, thereby producing continuous radial traces, wherein said falloff fitter fits said continuous radial traces to said model of falloff to determine said light falloff correction for said image.” Claim 19 has been amended to include the limitation of “removing discontinuities from said radial traces, thereby producing continuous radial traces, wherein said fitting comprises fitting said continuous radial traces to said model of falloff to determine said light falloff correction for said image.” And, Claim 29 has been amended to include the limitation of “removing discontinuities from said radial traces, thereby producing continuous radial traces, wherein said fitting comprises fitting said continuous radial traces to said model of light falloff to determine said amount of light falloff in said digital image.” Applicant has addressed the novel aspects relating to the removal of

discontinuities from the radial traces to produce continuous radial traces, in overcoming the rejection of Claim 1, and hence the reasons for patentability thereof. Based on these reasons, it is thus respectfully submitted that Claims 10, 19, and 29 likewise patentable.

Claims 2, 11, 20, 31 and 32 have been cancelled.

Claims 5-7, 9 depend either directly or ultimately from Claim 1. Applicant has already addressed the novel aspects that overcome the rejection of Claim 1, and hence the reasons for patentability thereof. It is thus respectfully submitted that Claims 5-7, 9 are likewise patentable.

Claims 14-16, 18 depend either directly or ultimately from Claim 10. Applicant has already addressed the novel aspects that overcome the rejection of Claim 10, and hence the reasons for patentability thereof. It is thus respectfully submitted that Claims 14-16, 18 are likewise patentable.

Claims 23-26, 28 depend either directly or ultimately from Claim 19. Applicant has already addressed the novel aspects that overcome the rejection of Claim 19, and hence the reasons for patentability thereof. It is thus respectfully submitted that Claims 23-26, 28 are likewise patentable.

Claims 35 and 37 depend ultimately from Claim 29. Applicant has already addressed the novel aspects that overcome the rejection of Claim 29, and hence the reasons for patentability thereof. It is thus respectfully submitted that Claims 35 and 37 are likewise patentable.

Claims 4, 13, 22, and 34

Reconsideration of the Examiner's rejection of Claims 4, 13, 22, and 34 under 35 U.S.C. 103(a) as being unpatentable over the combination of Kiriki et al. (U.S. Patent No. 6,219,446 B1) and Tanaka et al. (U.S. Patent No. 6,693,673 B1) is respectfully requested. Claims 4, 13, 22, and 34 depend from Claims 1, 10, 19, and 29, respectively. Applicant has already addressed the novel aspects that overcome the rejections of Claims 1, 10, 19, and 29, and hence the reasons for patentability thereof. Tanaka does not disclose any of the novel aspects of Claims 1, 10, 19, or 29. It is thus respectfully submitted that Claims 4, 13, 22, and 34 are likewise patentable.

Claims 8, 17, 27, and 36

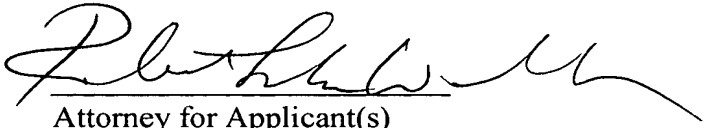
Reconsideration of the Examiner's rejection of Claims 8, 17, 27, and 36 under 35 U.S.C. 103(a) as being unpatentable over the combination of Kiriki et al. (U.S. Patent No. 6,219,446 B1) and Silverbrook (U.S. Patent Application Publication No. US 2004/0032512 AI) is respectfully requested. Claims 8, 17, 27, and 36 depend from Claims 1, 10, 19, and 29, respectively. Applicant has already addressed the novel aspects that overcome the rejections of Claims 1, 10, 19, and 29, and hence the reasons for patentability thereof. Silverbrook does not include any of the novel aspects of Claims 1, 10, 19, or 29. It is thus respectfully submitted that Claims 8, 17, 27, and 36 are likewise patentable.

Claim 30

Reconsideration of the Examiner's rejection of Claim 30 under 35 U.S.C. 103(a) as being unpatentable over the invention of Kiriki et al. (U.S. Patent No. 6,219,446 B1) and Toyoda et al. (U.S. Patent No. 5,461,440 A) is respectfully requested. Claim 30 depends from Claim 29. Applicant has already addressed the novel aspects that overcome the rejection of Claim 29, hence the reasons for patentability thereof. Toyoda does not include any of the novel aspects of Claim 29. It is thus respectfully submitted that Claim 30 is likewise patentable.

It is respectfully submitted, therefore, that in view of the above amendments and remarks, that this application is now in condition for allowance, prompt notice of which is earnestly solicited.

Respectfully submitted,


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Enclosures: Replacement Figure 2 and 3
Annotated Sheet Showing Changes to Figure 2 and 3

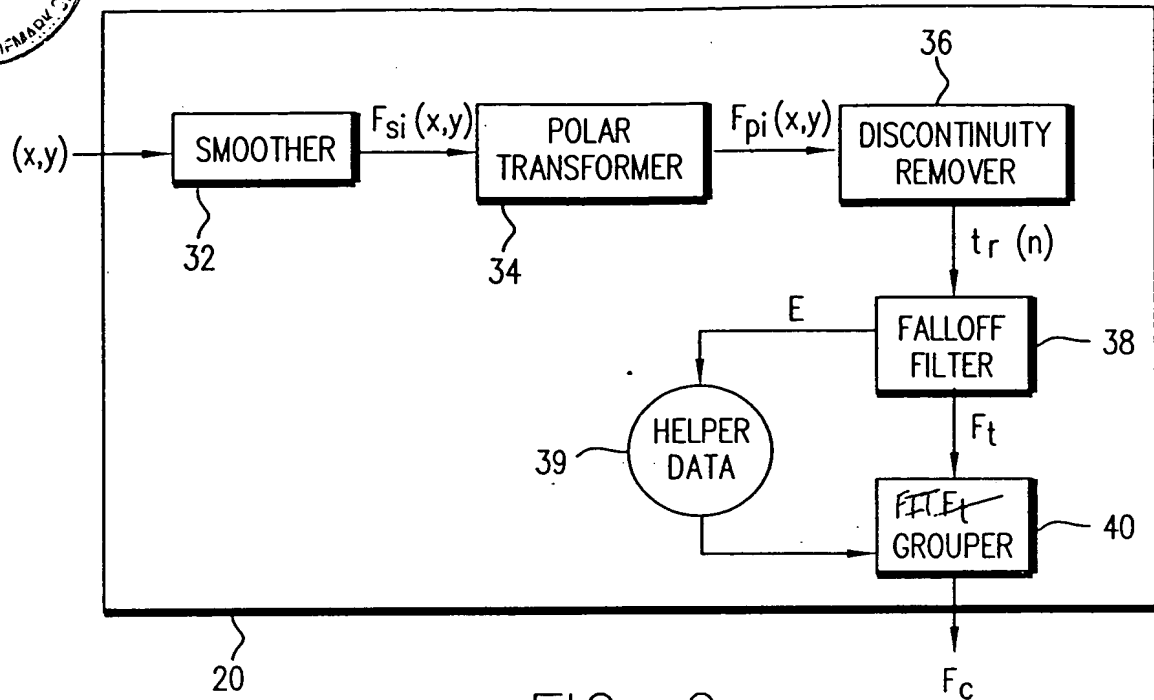


FIG. 2

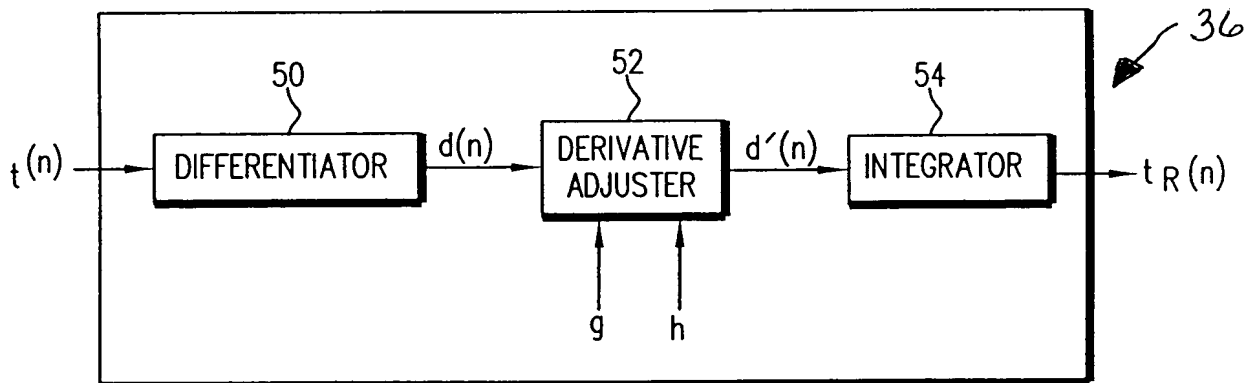


FIG. 3